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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,913	03/12/2004	Donald G. Newberg	CM06187H	8294
22917	7590	11/30/2005	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			RYMAN, DANIEL J	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,913	<b>Applicant(s)</b> NEWBERG ET AL.	
	<b>Examiner</b> Daniel J. Ryman	<b>Art Unit</b> 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 6-8, 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 13-22 is/are allowed.
- 6) ☒ Claim(s) 1-5, 9, 10, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 1, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 10/26/2005 have been fully considered but they are not persuasive. On page 9 of the Response, Applicant asserts that Smith does not disclose "a field embedded within the" timeslot. Examiner, respectfully, disagrees. Smith teaches that "only a subset of overhead information (which is, in many cases, no overhead information) is repeated in the subsequent time slot. The subsequent time slot may be a time slot consecutive with the first time slot." Col. 3, lines 9-13. Thus, since Smith teaches that the subsequent time slot *may* contain a *subset of overhead information*, it follows that Smith recognizes circumstances in which *every* time slot will contain information. However, every time slot will not contain *all* of the overhead information. Therefore, Examiner asserts that Smith discloses that "each burst comprises a field embedded within the burst."

2. In addition, Applicant asserts that a burst should not be equated with a time slot; however, Applicant does not further elaborate on this assertion. Without more than a mere assertion, Examiner is not convinced that equating a burst with a time slot is improper.

3. In view of the foregoing, Examiner maintains that the claims are obvious in view of the cited prior art.

### ***Claim Objections***

4. Claim 1 is objected to because of the following informalities: in lines 4 and 10, it is unclear if the phrase "one taken from the group of" is intended to be a Markush group. If so, then "one taken from the group of" should be changed to "one taken from the group consisting of". If

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not, then “one taken from the group of” should be changed to “one of”. Appropriate correction is required.

5. Claim 23 is objected to because of the following informalities: in line 4 “packet” should be “packet identifies a second type of information”. In addition, in line 2, it is unclear if the phrase “one taken from the group of” is intended to be a Markush group. If so, then “one taken from the group of” should be changed to “one taken from the group consisting of”. If not, then “one taken from the group of” should be changed to “one of”. Appropriate correction is required. Appropriate correction is required.

6. Claim 24 is objected to because of the following informalities: Claims 24 discloses that the signaling field either a) begins a new packet, completes a packet, or does not begin or complete a packet or b) identifies a second type of information. However, the phrase “does not begin or complete a packet” would include a field that “identifies a second type of information” since a field that identifies a second type of information does not signal the start or end of a packet. Therefore, Examiner suggests changing “does not begin or complete a packet” to “signals a segment of a packet that neither begins nor completes the packet.” In addition, in line 4, it is unclear if the phrase “one taken from the group of” is intended to be a Markush group. If so, then “one taken from the group of” should be changed to “one taken from the group consisting of”. If not, then “one taken from the group of” should be changed to “one of”. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 6,714,557) in view of Oliver (USPN 6,292,484) in further view of Cantoni et al. (USPN RE37,494).

9. Regarding claims 1 and 24, Smith discloses in a wireless communication system with an air interface comprising a plurality of bursts (col. 1, lines 31-33), a method comprising the step of defining a plurality of bursts, wherein each burst (time slot) comprises a field (overhead) embedded within the burst (col. 2, lines 52-col. 3, line 13); and wherein the field is one taken from the group of a synchronization field (preamble) and a signaling field (other fields in overhead) (col. 2, lines 52-col. 3, line 13) wherein the claim only requires that each burst have at least one field and that this one field be a synchronization field or a signaling field such that the "field" in one burst need only be a preamble *or* a signaling field; and wherein, when the field is a synchronization field, defining a position of at least one subsequent burst comprising the signaling field (col. 5, lines 16-21);

Smith does not expressly disclose that, when the field is a synchronization field, defining a position of at least one subsequent burst comprising the synchronization field; however, Smith does disclose that the synchronization field can be eliminated for a predetermined number of slots (col. 4, line 48-col. 5, line 7). Oliver teaches, in a TDMA communication system, using an offset to indicate the position of a subsequent embedded field (col. 3, lines 40-62) in order to allow the receiver to correctly ascertain the positions of fields in the data stream (col. 4, lines 22-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

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invention to define a position of at least one subsequent burst comprising the synchronization field in order to allow the receiver to correctly ascertain the position of the synchronization field when the synchronization field has been eliminated for a predetermined number of slots.

Smith in view of Oliver does not expressly disclose that, when the field is a signaling field, defining an indicator in a framing portion of the signaling field to identify that payload in the burst is taken from a group of (a) begins a new packet, (b) completes a packet, and (c) does not begin or complete a packet. Cantoni discloses, in a TDMA communication system, defining an indicator to identify that payload in the burst is taken from a group of (a) begins a new packet, (b) completes a packet, or (c) does not begin or complete a packet (col. 3, lines 65-66 and col. 4, line 59-col. 5, line 9) in order to allow a packet that is larger than the size of the time slot to be transmitted and correctly received (col. 1, lines 53-60 and col. 2, lines 40-50). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to define, when the field is a signaling field, an indicator in a framing portion of the signaling field to identify that payload in the burst is taken from a group of (a) begins a new packet, (b) completes a packet, and (c) does not begin or complete a packet in order to allow a packet that is larger than the size of the time slot to be transmitted and correctly received, where the information is “framing information” such that it is in a “framing portion of the signaling field.”

10. Regarding claim 2, Smith in view of Oliver in further view of Cantoni discloses that the signaling field carries non-voice information (Oliver: col. 3, lines 40-62).

11. Regarding claim 3, Smith in view of Oliver in further view of Cantoni discloses that each burst comprising the signaling field comprises one of a link control signaling (e.g. guard time) (Smith: col. 3, lines 28-33), and an encryption parameter.

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12. Regarding claim 4, Smith in view of Oliver in further view of Cantoni discloses that at least one burst comprising the signaling field carries link control signaling (e.g. guard time) (Smith: col. 3, lines 28-33).

13. Regarding claim 23, Smith in view of Oliver in further view of Cantoni discloses that if the field is a signaling field and the indicator of the signaling field is not one taken from the group of a) begins a new packet, b) completes a packet, and c) signals a segment of a packet that neither begins nor completes the packet then it identifies a second type of information (single slot message) (Cantoni: col. 5, lines 6-9).

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 6,714,557) in view of Oliver (USPN 6,292,484) in further view of Cantoni et al. (USPN RE37,494) as applied to claim 1 above, and further in view of Jordan et al. (USPN 2004/0083393).

15. Regarding claim 5, Smith in view of Oliver in further view of Cantoni does not expressly disclose that an encryption parameter is carried in one of the bursts comprising the signaling field, and wherein a receiving device of the plurality of bursts knows a location of the burst carrying the encryption parameter a priori. However, Smith in view of Oliver in further view of Cantoni does disclose having the receiving device know the location of a burst carrying particular information a priori (Oliver: col. 3, lines 40-62). Jordan teaches, in a wireless communication system, sending a new password key identifier (i.e. encryption information) (Fig. 7 and para. 72) in order to dynamically change password keys (para. 11) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to carry the encryption parameter in one of the bursts comprising the signaling field, wherein a receiving

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device of the plurality of bursts knows a location of the burst carrying the encryption parameter a priori in order to dynamically change password keys.

16. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 6,714,557) in view of Oliver (USPN 6,292,484) in further view of Cantoni et al. (USPN RE37,494) as applied to claim 1 above, and further in view of Fackenthal et al. (USPN 2003/0061558).

17. Regarding claim 9, Smith in view of Oliver in further view of Cantoni does not expressly disclose that the link control signaling is formed into a matrix, having rows and columns, prior to forward error correction encoding, wherein the rows of the matrix are encoded with a block code, and wherein the columns of the matrix are encoded with a parity checksum. Fackentahl discloses an error correcting matrix with Hamming code encoded rows and parity coded columns (see claims 1-3) where it is implicit that this ensures that important signaling information is not lost or corrupted. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the link control signaling into a matrix, having rows and columns, prior to forward error correction encoding, wherein the rows of the matrix are encoded with a block code, and wherein the columns of the matrix are encoded with a parity checksum in order to ensure that important signaling information is not lost or corrupted.

18. Regarding claim 10, Smith in view of Oliver in further view of Cantoni in further view of Fackenthal does not expressly disclose that the block code is a Hamming (16, 11) code; however, Smith in view of Oliver in further view of Cantoni in further view of Fackenthal does disclose the use of a Hamming code (Fackenthal: claims 1-3). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of



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any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Smith in view of Oliver in further view of Cantoni in further view of Fackenthal discloses the use of a Hamming code, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any Hamming code, including Hamming code (16,11), absent a showing of criticality by Applicant.

#### *Allowable Subject Matter*

19. Claims 13-22 are allowed. The prior art does not disclose or fairly suggest signaling a mode for the system using a unique synchronization pattern.

#### *Conclusion*

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

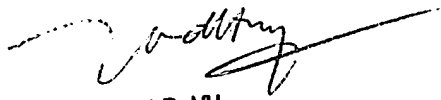
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Ryman  
Examiner  
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